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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
QIN, YIXING	

ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/925,004	AGNE, WERNER	
	Examiner	Art Unit	
	Yixing Qin	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. All of these claims claim that the second network connects control function units for real time communication. However, from the figures control function units LF1-LF4 does not appear to have a direct connection to each other, so it seems like it would be a serial connection, where signals may have to pass through one control function unit to reach another. For example, LF1 has a direct connection to LF2 and LF3 and does not have a direct connection to LF4, and it must communicate through line Q1 to LF3, then line Q2 to LF4. Thus, it is unclear how there can be real time cross communication if a signal cannot reach LF4 without going through another control unit (LF3) first. Appropriate correction or explanation is required.

Response to Arguments

Applicant's arguments in the Appeal Brief filed 1/25/08 have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made. Please see the rejection below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

I. Claims 6-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokiwa (U.S. Patent No. 6,343,549) in view of Tenfeldeet al (U.S. Patent No. 5,873,307)

Regarding claims 6, 15, 18 and 19, Tokiwa discloses a data transmission system for use in a machine comprising:

a plurality of drive systems each comprising an associated control functional unit, wherein each control function unit only controls the drive system to which it is associated (Fig. 1 and column 3, lines 1-8 that there are a plurality of printing units CT1-CT4, item 3 is a slave control section that is associated with each drive system (column 1, lines 33-35 and column 3, lines 21-27).)

control computers associated to each drive system linked through a first control network and coupled with said control functional units to perform high level process control; (master control section 1 and 2 are the control computers and are linked through the bottom portion of the network 5. One of ordinary skill would recognize that even though this is part of one network 5, it essentially performs the equivalent function as the first network in the applicant's invention by linking the control computers together with the control function units.)

It does not explicitly disclose "a second independent network interconnecting said control functional units for real time cross-communication there between,

whereby information relating to movement control from any one of said control functional units is simultaneously transmitted to all of the other of said control functional units."

However, Tokiwa discloses in Fig. 1, that each slave section are connected to one another through a network. For example, #11, #12, #13, and #14 are serially

connected. This can be interpreted as a second network. The secondary reference, Tenfeldeet, further discloses in Fig. 1 and column 6, line 61-column 7, line 28 that when a mis-sheet is determined, signals can be passed among the various control units 1'-5' to perform switching measure on angle values. These angle values are the rotation angles of moving parts as described in column 1, lines 10-32.

Tokiwa and Tenfeldeet are combinable because both are in the art of controlling printer movement.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have allowed the various control units to communicate with each other.

The motivation would have been to allow the various part of the printing system to function correctly.

Therefore, it would have been obvious to combine Tokiwa and Tenfeldeet to obtain the invention as specified.

Claims 18 and 19 are directed to using Ethernet networks, but as explained below in the rejection to claims 7,8,16 and 17, Ethernet networks are well known even though neither reference explicitly discloses the use of an Ethernet network.

Regarding claims 7, 8, 16, 17, Tokiwa and Tenfeldeet use the words "network" or "bus" and not explicitly an Ethernet network. However, Ethernet networks are a well known medium to be used in communicating information.

Regarding claim 9, Tokiwa discloses the data transmission system according to claim 6, wherein data and synchronization signals from drive regulators can be interchanged with an associated control functional unit using Ethernet real-time communication. (Fig. 3 the internal components of a slave control unit 3. Various components such as the master speed output section 32, feedback speed output section 39 and the motor driver can be combined with the motor M and the printing couple C (column 3, lines 13-16) to form a drive regulator since these components help regulate speed.

Regarding claim 10, Tokiwa discloses the data transmission system according to claim 6, wherein the machine is a printing machine. (Fig. 1)

Regarding claim 11, Tokiwa discloses the data transmission system according to claim 6, wherein each drive system comprises a plurality of drive regulators coupled with each respective control functional unit. (Fig. 1 -the drive regulator BK - formed from M with C - is coupled to the slave control unit)

Regarding claim 12, Tokiwa discloses the data transmission system according to claim 11, wherein the drive regulators of one drive system are linked through a third network selected from the group consisting of a ring network, a serial network, and a

star network. (Figs. 1 and 3 of Tokiwa - the drive regulator as described above in claim 9 is connected through a network, which looks to be serial)

Regarding claim 13, this claim has been addressed in claim 7 above.

Regarding claim 14, Tokiwa discloses the data transmission system according to claim 6, wherein the first network is used to transmit non-time critical data or parameters. (column 4, lines 26-32 that the information that the slave control unit can receive non-time critical data or parameters such as a master speed or phase values.)

Regarding claim 20, this claim has been addressed in claims 12 and 19

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YQ

/Mark K Zimmerman/
Supervisory Patent Examiner, Art Unit 2625